

Wind Turbine Guidelines Advisory Committee
Landscape/Habitat Subcommittee
 DRAFT Mapping Tools Case Studies

From: Mike Daulton

The Nature Conservancy Wind maps

Summary of Metadata for Data Layers mapped.
 Full metadata documents (FGDC format) are available.

| | TNC Great Plains Untilled Landscapes | TNC Ecoregional Portfolio Sites | Wind Energy Potential | Sensitive Species |
|--|---|--|--|---|
| What is the source of the landscape or biological data? | Derived from early 1990s Landsat TM Imagery, visually interpreted by one TNC staff person and digitized into GIS data layer | TNC Ecoregional Assessments conducted by TNC ecologist and outside agency experts. | NREL (US Dept. of Energy); MN Dept. of Commerce; AWS Truewind, LLC.; IA Energy Center; West Texas A&M University | NatureServe, USFWS |
| What is the age of the data? | Source Images date from early 1990s. Data created 2001 | Varies from mid to late 1990s to 2008. | Varies, from 1990s to present | Varies by species |
| What is the pixel size (if applicable)? | NA (Polygons) | NA (Polygons) | NREL: NA (Polygons) TX: 750m IA: 200m NY: 200m | NA (Polygons) |
| How many layers are there (if applicable)? | One | One | One Layer, 7 wind power classes. | One per species |
| What is the scale of the data? | Nominal Scale 1:280,000 | Varies, and not explicitly stated, but approx. 1:100,000 | Varies, and not explicitly stated, but approx. 1:100,000 | Unknown. Some species locations may be randomly generalized to obscure exact locations. |
| What is the | Great Plains | USA (50) | Most Lower 48 | Species |

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| geographic coverage? | Bioregion | States). | States, except LA KY, TN, MI, AL, FL, GA, SC. | ranges in North America. |
| Does the data identify what is NOT there? | Areas were identified as untilled if they did not appear to have been converted from natural vegetation to agricultural, residential/urban, surficial mining, or other uses. Untilled landscapes do include small inclusions of converted areas and areas with varying degrees of impact from non-conversion land use activities, such as grazing, oil extraction, and shrub/tree removal (e.g., chaining). As such, this coverage represents a snapshot in time, circa 1990 | Freshwater and marine Ecoregional portfolios; biodiversity conservation targets (species and ecosystems) and goals for their conservation. | All wind energy potential data require validation using local meteorological field measurements at potential and actual wind turbine sites. | Absence of species occurrences does not mean the species is not present. |

From: Caitlin Coberly

The National Atlas Bat Distribution Maps. 9Note, these maps were obtained from Bat Conservation International. The newest maps may be obtained from Bat Conservation International (<http://www.batcon.org/home/default.asp>)

Note that maps are not available in GIS format.

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| | BCI bat distribution maps/National Atlas Bat Distribution maps |
| What is the source of the | U.S. STATE NATURAL HERITAGE PROGRAMS, CANADIAN CONSERVATION DATA CENTERS, PUBLISHED |

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| landscape or biological data? | LITERATURE, UNPUBLISHED REPORTS, MUSEUM COLLECTIONS, AND PERSONAL COMMUNICATIONS FROM UNIVERSITY, FEDERAL, STATE, AND LOCAL BIOLOGISTS. |
| What is the age of the data? | WAS COLLECTED FROM THE ABOVE ENTITIES BETWEEN 2000 AND 2003. MAPS WERE PRODUCED IN 2003, BUT THEY REFLECT AVAILABLE DATA FROM 1900 TO CURRENT. |
| What is the pixel size (if applicable)? | NA (Polygons) |
| How many layers are there (if applicable)? | N/A |
| What is the scale of the data? | THE RAW DATA VARIES. SOME OF IT IS SPECIFIC TO A UTM LOCATION, SPECIFIC LAT/LONG OR GEOGRAPHIC SITE (LIKE A CAVE). OTHER DATA IS ONLY SPECIFIC TO COUNTY. ALL THE RAW DATA IS SPECIFIC AT LEAST TO THE COUNTY LEVEL. THIS DATA CAN ONLY BE RELEASE IN SUMMARIZED MAPS (GENERAL DISTRIBUTION - SPECIFIC ONLY TO THE COUNTY LEVEL) AND CANNOT BE SHARED IN IT'S RAW FORM. |
| What is the geographic coverage? | US DISTRIBUTION ONLY, NOT MEXICO. |
| Does the data identify what is NOT there? | NO - THE DATA ONLY REPRESENTS SPECIES RECORDS AVAILABLE TO US. IT IS NOT A CENSUS AND DOES NOT REFLECT AREAS WHERE SURVEYS MAY HAVE BEEN CONDUCTED WITH SUFFICIENT EFFORT TO INFER ABSENCE. ALL AVAILABLE DATA IS NOT INCLUDED IN THIS MAP. MANY RESEARCHERS, PRIVATE CONSULTING COMPANIES AND OTHER ENTITIES MAY HAVE OCCURANCE RECORDS THAT ARE NOT INCLUDED IN THIS MAP. IT IS INTENDED FOR GENERAL DISTRIBUTION INFORMATION ONLY, AND IS CANNOT BE USED TO INFER IF A SPECIES ABSOLUTELY OCCURS OR DOES NOT OCCUR ON A PROJECT SITE. YOU CAN HOWEVER, PROBABLY ASSUME THAT IF THE PROJECT SITE IS WELL OUT OF THE GENERAL RANGE OF THE SPECIES THAT IT DOES NOT OCCUR THERE. FOR EXAMPLE, WE CAN ASSUME YOU WILL NOT FIND AN INDIANA MYOTIS IN NEVADA. |

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Author: Greg Hueckel

| | Priority Habitats and Species (PHS) – State Agencies |
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| What is the source of the landscape or biological data? | PHS data are stored and maintained by Washington Department of Fish and Wildlife (WDFW) in Olympia, WA. Data are most often supplied by WDFW professional biologists, but may include local government biologists or tribal biologists. |
| What is the age of the data? | The age of PHS data varies, but regional data are reviewed at least every 2 - 3 years for accuracy and completeness, and updated as necessary by regional biologists |
| What is the pixel size (if applicable)? | Pixel size - see question 5. |
| How many layers are there (if applicable)? | PHS data are comprised of an attributed polygon layer, a point data layer, and two linear data layers (freshwater salmon distribution and nearshore spawning forage fish distribution) |
| What is the scale of the data? | PHS data vary in spatial scale. Some data have precise coordinates such as caves, eagle nests, heron rookeries, etc. Some data are polygonal due to the nature of the data and may span acres to hectares; for example, shorebird-nesting colonies, elk winter range, herring spawning sites. Additionally, WDFW coarsens sensitive data, such as spotted owl nesting sites, to a section (1 sq mile) for ESA listed species that may be vulnerable to disturbance. |
| What is the geographic coverage? | PHS data are Washington State wide |
| Does the data identify what is NOT there? | PHS data do not identify what is not present. |